THE EFFECT OF RECOVERY STRATEGIES ON PHYSICAL PERFORMANCE AND CUMULATIVE FATIGUE IN COMPETITIVE BASKETBALL.

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Purpose: To evaluate the effectiveness of recovery strategies on physical performance during and after three consecutive days of a tournament style basketball competition. Methods: Male players (n=29) were assigned to one of three treatment groups: carbohydrate+stretching (CON, n=9), cold water immersion (CWI, n=10) and full leg compression garments (COMP, n=10). Effects of the recovery strategies on pre-post tournament performance tests were expressed as mean change (% ± SD of the change score). Changes and differences were standardized for accumulated game time, assessed against the smallest worthwhile change for each test, and reported qualitatively. Results: Accumulated fatigue was evident over the tournament with small-moderate impairments in performance tests. Sprint and agility performance decreased by 0.7% ± 1.3 and 2.0% ± 1.9 respectively. Vertical jump decreased substantially after the first day for all treatments, and remained suppressed at post-tournament. CWI was substantially better in maintaining 20m acceleration with only a 0.5% ± 1.4 reduction in 20m time after three days compared with a 3.2% ± 1.6 reduction for COMP. CWI (-1.4% ± 1.7) and COMP (-1.5% ± 1.7) showed similar substantial benefits in maintaining line-drill performance time, whereas CON elicited a 0.4% ± 1.8 reduction over the tournament. Sit & Reach flexibility decreased for all groups, however CWI had the smallest reduction in flexibility (4 cm compared with 5-7cm for CON and COMP). Conclusion: Three days of basketball tournament play elicited small to moderate impairments in physical test performance. Cold water immersion appears to promote better restoration of physical performance measures than compression garments and stretching recovery strategies.

Keywords: Basketball, Applied Physiology, Recovery

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